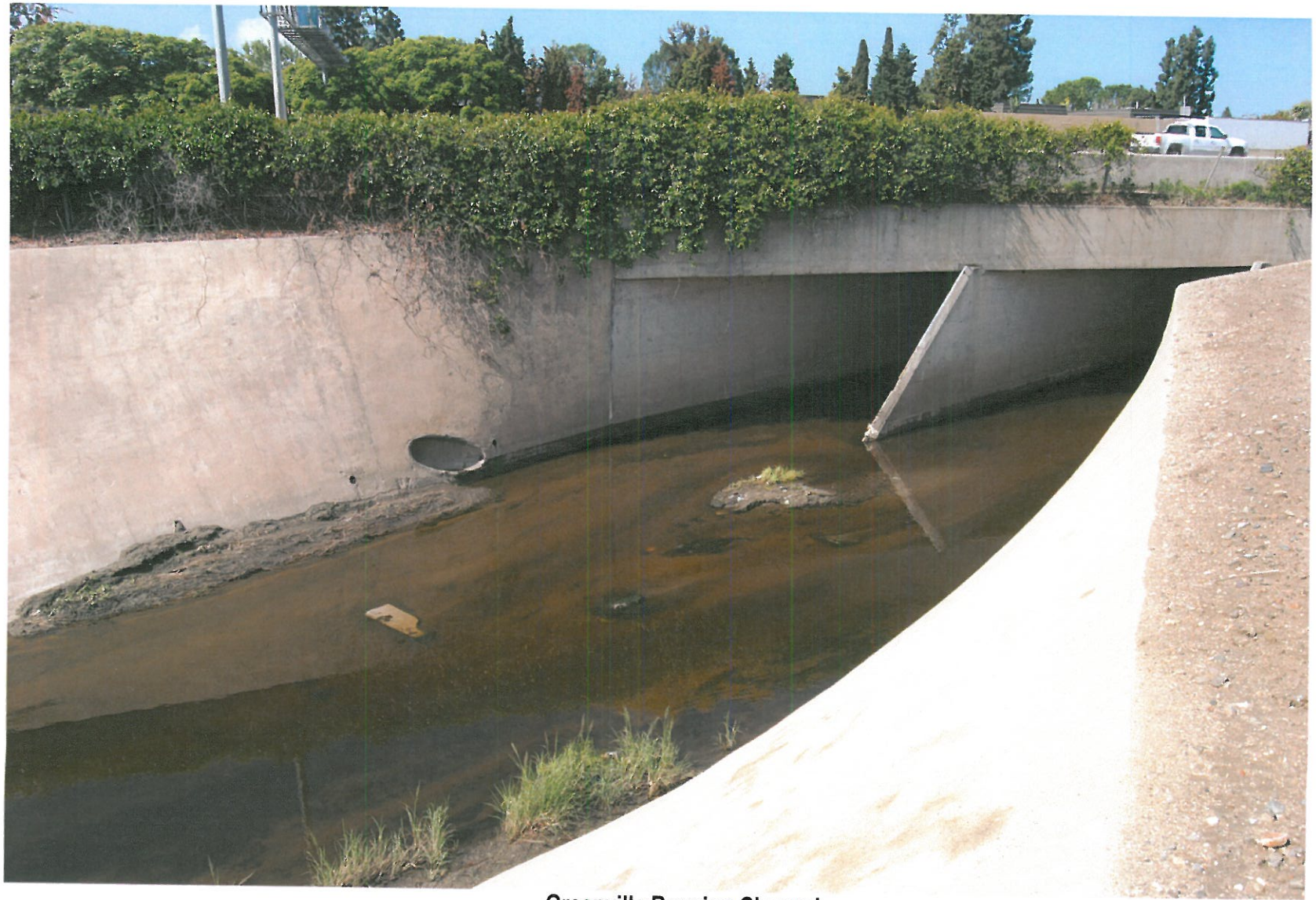


Greenville Banning Channel

Photo Date: April 28, 2010

Direction: Picture taken facing southwest, from north of I-405.

Gisler Storm Channel, west of Fairview Rd.

Photo Date: April 4, 2009

Direction: Picture taken facing west, from north of I-405.

Gisler Storm Channel, east of Fairview Rd.

Photo Date: April 4, 2009

Direction: Picture taken facing east, from north of I-405.

Delhi Storm Channel

Photo Date: April 27, 2010

Direction: Picture taken facing South, from north of I-405.

Delhi Storm Channel

Photo Date: April 27, 2010

Description: Picture taken facing North, from south of I-405.

APPENDIX C

PROPOSED ROADWAY IMPROVEMENTS

ADJACENT TO FLOODPLAINS

Proposed New Edge of Roadway
Right-of-Way

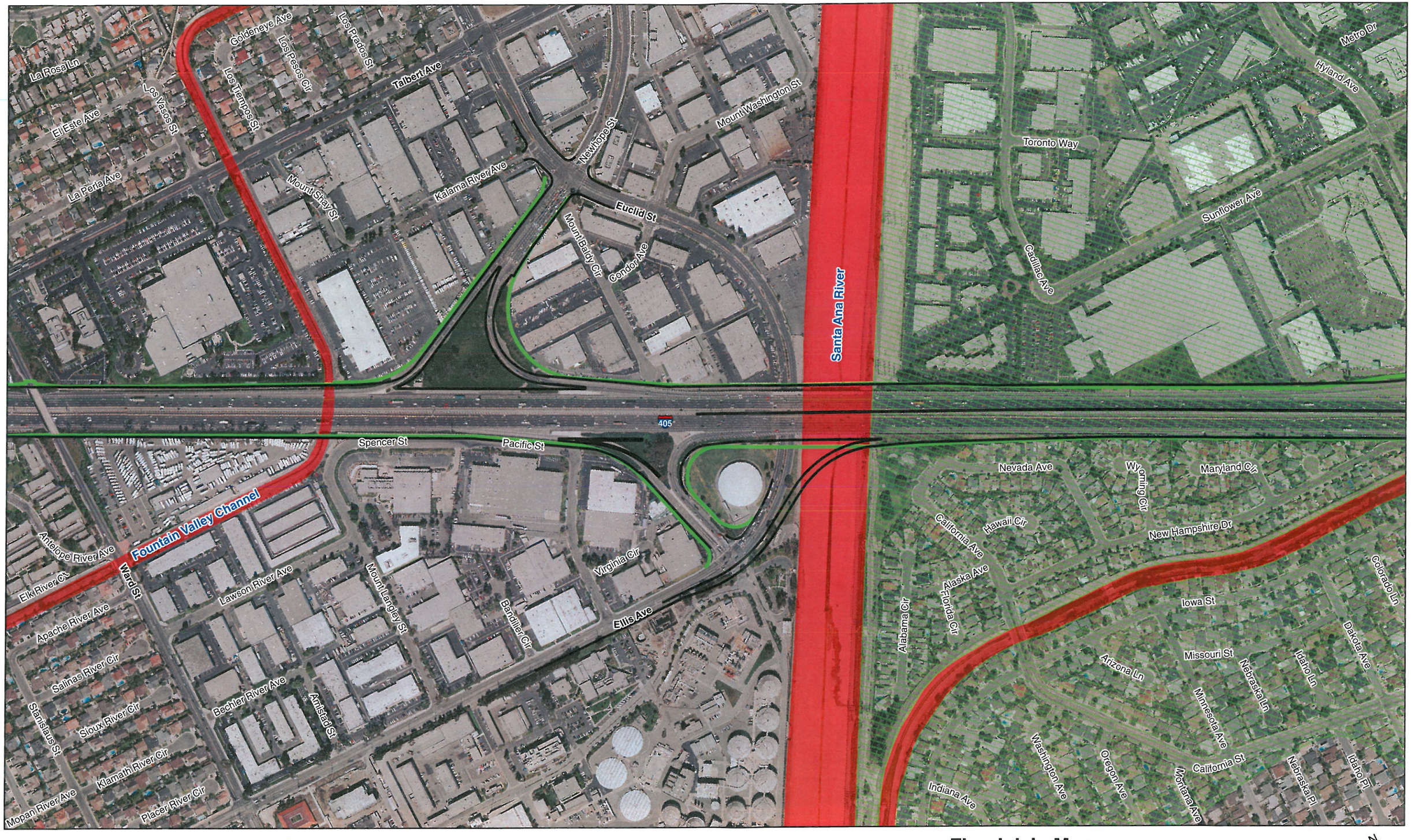
Flood Hazard Zones

A
AE
AH
AO
D
OPEN WATER
X
X PROTECTED BY LEVEE

Floodplain Map
1 of 9

0 250 500 1,000 Feet

N



Proposed New Edge of Roadway
Right-of-Way

Flood Hazard Zones
A
AE
AH
AO
D
X
X PROTECTED BY LEVEE
OPEN WATER

Floodplain Map
2 of 9

0 250 500 1,000 Feet

N

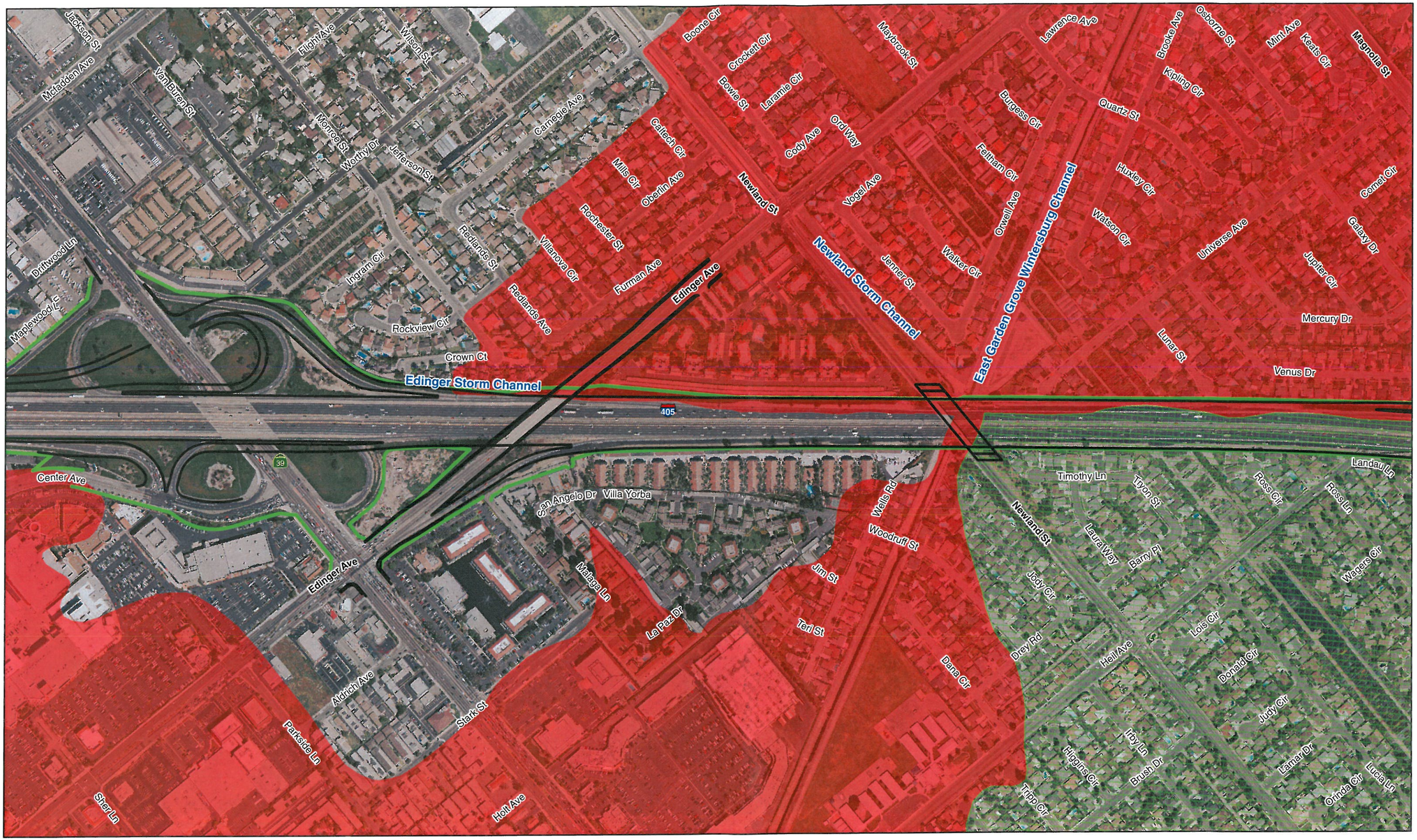
Proposed New Edge of Roadway
Right-of-Way

Flood Hazard Zones
A
AE
AH
AO
D
OPEN WATER
X
X PROTECTED BY LEVEE

Floodplain Map
3 of 9

0 250 500 1,000 Feet

N



Proposed New Edge of Roadway
Right-of-Way

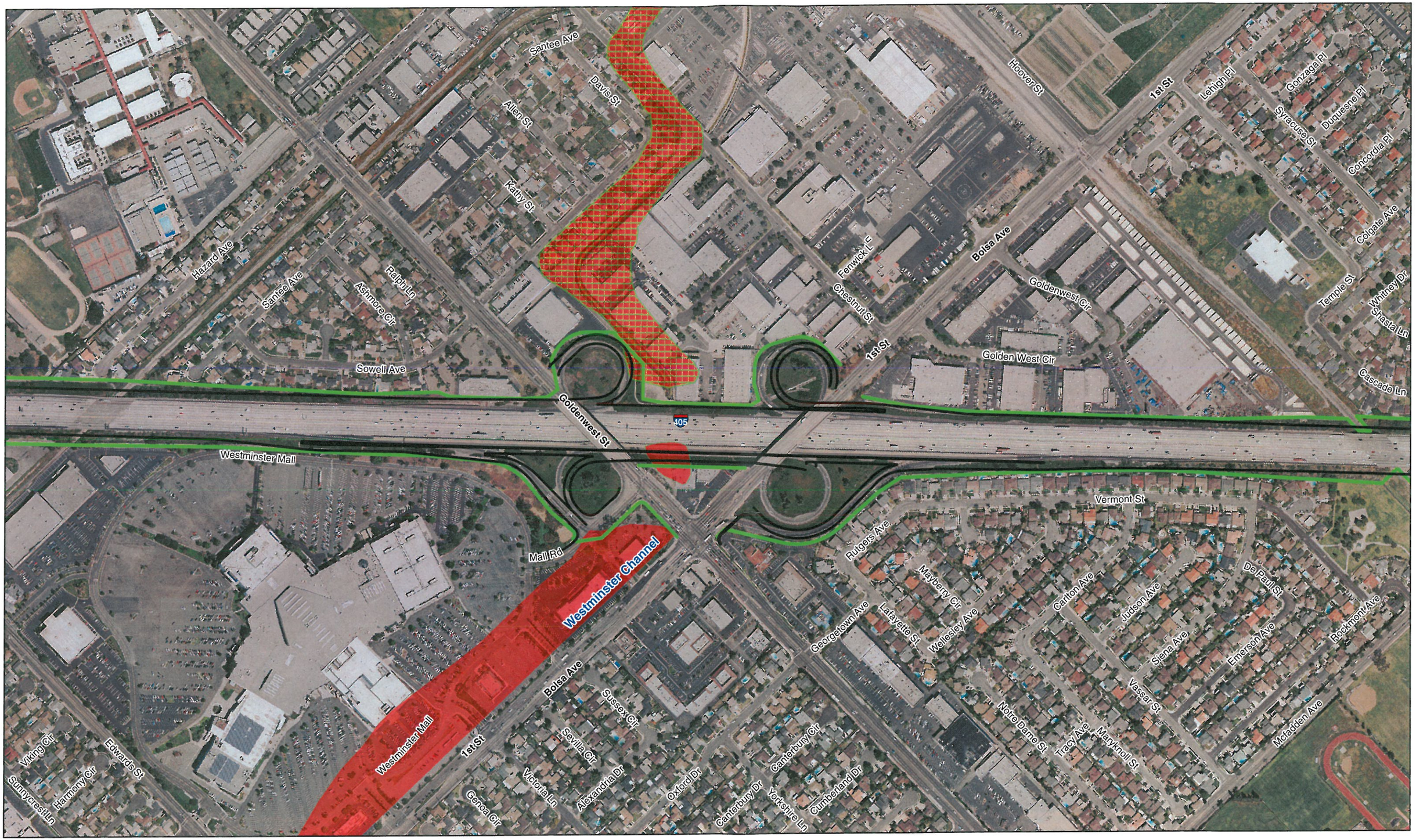
Flood Hazard Zones

A
AE
AH
AO
D
OPEN WATER
X
X PROTECTED BY LEVEE

Floodplain Map
4 of 9

0 250 500 1,000 Feet

N



Proposed New Edge of Roadway
Right-of-Way

Flood Hazard Zones

A
AE
AH
AO
D
OPEN WATER
X
X PROTECTED BY LEVEE

Floodplain Map
5 of 9

0 250 500 1,000 Feet

N

Proposed New Edge of Roadway
Right-of-Way

Flood Hazard Zones

A
AE
AH
AO
D
OPEN WATER
X
X PROTECTED BY LEVEE

Floodplain Map
6 of 9

0 250 500 1,000 Feet

N

Proposed New Edge of Roadway
Right-of-Way

Flood Hazard Zones

A
AE
AH
AO
D
OPEN WATER
X
X PROTECTED BY LEVEE

Floodplain Map
7 of 9

0 250 500 1,000 Feet

N

Proposed New Edge of Roadway
Right-of-Way

Flood Hazard Zones

A
AE
AH
AO
D
OPEN WATER
X
X PROTECTED BY LEVEE

Floodplain Map
8 of 9

0 250 500 1,000 Feet

N

Proposed New Edge of Roadway
Right-of-Way

Flood Hazard Zones

A
AE
AH
AO
D
OPEN WATER
X
X PROTECTED BY LEVEE

Floodplain Map
9 of 9

0 250 500 1,000 Feet

N

APPENDIX D

LOCATION HYDRAULIC STUDY FORMS

LOCATION HYDRAULIC STUDY FORM

Dist. 12 Co. OC Rte. 405 P.M. 9.89/11.45
EA 71621 Bridge No. N/A
Floodplain Description: Gisler Storm Channel

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Roadway widening may impact flood structures during construction, but will be restored to original state.

2. ADT: Current 307,000 Projected 435,000 (Alt. 3)

3. Hydraulic Data: Base Flood Q_{100}= Unknown ft^3 / s
WSE_{100}= Unknown The flood of record, if greater than Q_{100}:
Q= Unknown ft^3 / s WSE= Unknown
Overtopping flood Q= Unknown m^3 / s WSE= Unknown
Are NFIP maps and studies available? YES X NO

4. Is the highway location alternative within a regulatory floodway ?
YES NO X

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential Q_{100} backwater damages:

A.	Residences?	NO	X	YES
B.	Other Bldgs?	NO	X	YES
C.	Crops?	NO	X	YES
D.	Natural and beneficial floodplain values?	NO	X	YES

6. Type of Traffic:

A.	Emergency supply or evacuation route?	NO		YES X
B.	Emergency vehicle access?	NO		YES X
C.	Practicable detour available?	NO	X	YES
D.	School bus or mail route?	NO	X	YES

7. Estimated duration of traffic interruption for 100-year event hours: 0

8. Estimated value of Q_{100} flood damages (if any) – moderate risk level.

A.	Roadway	$ 0
B.	Property	$ 0
	Total	$ 0

9 Assessment of Level of Risk

Low X
Moderate ____
High ____

For High Risk projects, during design phase, additional Design Study Risk Analysis May be necessary to determine design alternative.

Signature – Dist. Hydraulic Engineer _____ Date _____
(Item numbers 3,4,5,7,9)

Is there any longitudinal encroachment, significant encroachment, or any support of incompatible Floodplain development?

NO X YES

If yes, provide evaluation and discussion of practicability of alternatives in accordance with 23 CFR 650.113

Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.

Signature – Dist. Project Engineer _____ Date _____
(Item numbers 1,2,6,8)

LOCATION HYDRAULIC STUDY FORM

Dist. 12 Co. OC Rte. 405 P.M. 11.70
EA 071621 Bridge No. 55 0476
Floodplain Description: Greenville Banning Channel

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Roadway widening over 3-12x12 RCB, extend existing RCB on upstream side.

2. ADT: Current 307,000 Projected 435,000 (Alt. 3)

3. Hydraulic Data: Base Flood Q_{100}= 3,450 ft^3 / s
WSE_{100}= Unknown The flood of record, if greater than Q_{100}:
Q= Unknown ft^3 / s WSE= Unknown
Overtopping flood Q= Unknown m^3 / s WSE= Unknown
Are NFIP maps and studies available? YES X NO

4. Is the highway location alternative within a regulatory floodway ?
YES NO X

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential Q_{100} backwater damages:

A. Residences?	NO X	YES
B. Other Bldgs?	NO X	YES
C. Crops?	NO X	YES
D. Natural and beneficial floodplain values?	NO X	YES

6. Type of Traffic:

A. Emergency supply or evacuation route?	NO	YES X
B. Emergency vehicle access?	NO	YES X
C. Practicable detour available?	NO X	YES
D. School bus or mail route?	NO X	YES

7. Estimated duration of traffic interruption for 100-year event hours: 0

8. Estimated value of Q_{100} flood damages (if any) – moderate risk level.

A.	Roadway	$ 0
B.	Property	$ 0
	Total	$ 0

9 Assessment of Level of Risk

Low X
Moderate ____
High ____

For High Risk projects, during design phase, additional Design Study Risk Analysis May be necessary to determine design alternative.

Signature – Dist. Hydraulic Engineer _____ Date _____
(Item numbers 3,4,5,7,9)

Is there any longitudinal encroachment, significant encroachment, or any support of incompatible Floodplain development?

NO X YES ____

If yes, provide evaluation and discussion of practicability of alternatives in accordance with 23 CFR 650.113

Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.

Signature – Dist. Project Engineer _____ Date _____
(Item numbers 1,2,6,8)

LOCATION HYDRAULIC STUDY FORM

Dist. 12 Co. OC Rte. 405 P.M. 12.41
EA 071621 Bridge No. 55 0258
Floodplain Description: Santa Ana River

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Bridge widening, pier wall extension, new pier walls for Euclid on-ramp.

2. ADT: Current 307,000 Projected 435,000 (Alt. 3)

3. Hydraulic Data: Base Flood Q_{100}= 47,000 ft^3 / s
WSE_{100}= Unknown The flood of record, if greater than Q_{100}:
Q= Unknown ft^3 / s WSE= Unknown
Overtopping flood Q= Unknown m^3 / s WSE= Unknown
Are NFIP maps and studies available? YES X NO

4. Is the highway location alternative within a regulatory floodway ?
YES X NO

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential Q_{100} backwater damages:

A. Residences?	NO X	YES
B. Other Bldgs?	NO X	YES
C. Crops?	NO X	YES
D. Natural and beneficial floodplain values?	NO X	YES

6. Type of Traffic:

A. Emergency supply or evacuation route?	NO	YES X
B. Emergency vehicle access?	NO	YES X
C. Practicable detour available?	NO X	YES
D. School bus or mail route?	NO X	YES

7. Estimated duration of traffic interruption for 100-year event hours: 2

8. Estimated value of Q_{100} flood damages (if any) – moderate risk level.

A.	Roadway	$ 0
B.	Property	$ 0
	Total	$ 0

9 Assessment of Level of Risk

Low X
Moderate ____
High ____

For High Risk projects, during design phase, additional Design Study Risk Analysis May be necessary to determine design alternative.

Signature – Dist. Hydraulic Engineer _____ Date _____
(Item numbers 3,4,5,7,9)

Is there any longitudinal encroachment, significant encroachment, or any support of incompatible Floodplain development?

NO ____ YES X

If yes, provide evaluation and discussion of practicability of alternatives in accordance with 23 CFR 650.113

Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.

Signature – Dist. Project Engineer _____ Date _____
(Item numbers 1,2,6,8)

LOCATION HYDRAULIC STUDY FORM

Dist. 12 Co. OC Rte. 405 P.M. 12.87
EA 071621 Bridge No. N/A
Floodplain Description: Fountain Valley Channel

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Roadway widening over 2-10x7 RCB, lengthen culvert, modify inlet and outlet structures.

2. ADT: Current 307,000 Projected 435,000 (Alt. 3)

3. Hydraulic Data: Base Flood Q_{100}= 172 ft^3 / s
WSE_{100}= Unknown The flood of record, if greater than Q_{100}:
Q= Unknown ft^3 / s WSE= Unknown
Overtopping flood Q= Unknown m^3 / s WSE= Unknown
Are NFIP maps and studies available? YES X NO

4. Is the highway location alternative within a regulatory floodway ?
YES NO X

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential Q_{100} backwater damages:

A.	Residences?	NO	X	YES
B.	Other Bldgs?	NO	X	YES
C.	Crops?	NO	X	YES
D.	Natural and beneficial floodplain values?	NO	X	YES

6. Type of Traffic:

A.	Emergency supply or evacuation route?	NO		YES X
B.	Emergency vehicle access?	NO		YES X
C.	Practicable detour available?	NO	X	YES
D.	School bus or mail route?	NO	X	YES

7. Estimated duration of traffic interruption for 100-year event hours: 2

8. Estimated value of Q_{100} flood damages (if any) – moderate risk level.

A.	Roadway	$ 0
B.	Property	$ 0
	Total	$ 0

9 Assessment of Level of Risk

Low X
Moderate ____
High ____

For High Risk projects, during design phase, additional Design Study Risk Analysis May be necessary to determine design alternative.

Signature – Dist. Hydraulic Engineer _____ Date _____
(Item numbers 3,4,5,7,9)

Is there any longitudinal encroachment, significant encroachment, or any support of incompatible Floodplain development?

NO X YES ____

If yes, provide evaluation and discussion of practicability of alternatives in accordance with 23 CFR 650.113

Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.

Signature – Dist. Project Engineer _____ Date _____
(Item numbers 1,2,6,8)

LOCATION HYDRAULIC STUDY FORM

Dist. 12 Co. OC Rte. 405 P.M. 14.50/16.98
EA 071621 Bridge No. 55 0478
Floodplain Description: Ocean View Channel

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Roadway widening over 2-12x9.5 RCB, lengthen culvert upstream.

2. ADT: Current 257,000 Projected 352,000 (Alt. 3)

3. Hydraulic Data: Base Flood Q_{100}= 1,930 ft^3 / s
WSE_{100}= Unknown The flood of record, if greater than Q_{100}:
Q= Unknown ft^3 / s WSE= Unknown
Overtopping flood Q= Unknown m^3 / s WSE= Unknown
Are NFIP maps and studies available? YES X NO

4. Is the highway location alternative within a regulatory floodway ?
YES NO X

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential Q_{100} backwater damages:

A. Residences?	NO X	YES
B. Other Bldgs?	NO X	YES
C. Crops?	NO X	YES
D. Natural and beneficial floodplain values?	NO X	YES

6. Type of Traffic:

A. Emergency supply or evacuation route?	NO	YES X
B. Emergency vehicle access?	NO	YES X
C. Practicable detour available?	NO X	YES
D. School bus or mail route?	NO X	YES

7. Estimated duration of traffic interruption for 100-year event hours: 2

8. Estimated value of Q_{100} flood damages (if any) – moderate risk level.

A.	Roadway	$ 0
B.	Property	$ 0
	Total	$ 0

9 Assessment of Level of Risk

Low X
Moderate ____
High ____

For High Risk projects, during design phase, additional Design Study Risk Analysis May be necessary to determine design alternative.

Signature – Dist. Hydraulic Engineer _____ Date _____
(Item numbers 3,4,5,7,9)

Is there any longitudinal encroachment, significant encroachment, or any support of incompatible Floodplain development?

NO X YES ____

If yes, provide evaluation and discussion of practicability of alternatives in accordance with 23 CFR 650.113

Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.

Signature – Dist. Project Engineer _____ Date _____
(Item numbers 1,2,6,8)

LOCATION HYDRAULIC STUDY FORM

Dist. 12 Co. OC Rte. 405 P.M. 14.50/16.98
EA 071621 Bridge No. 55 0480
Floodplain Description: East Garden Grove Wintersburg Channel

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

New bridges over channel, new pier wall at center of channel.

2. ADT: Current 257,000 Projected 352,000 (Alt. 3)

3. Hydraulic Data: Base Flood Q_{100}= 5,910 ft^3 / s
WSE_{100}= Unknown The flood of record, if greater than Q_{100}:
Q= Unknown ft^3 / s WSE= Unknown
Overtopping flood Q= Unknown m^3 / s WSE= Unknown
Are NFIP maps and studies available? YES X NO

4. Is the highway location alternative within a regulatory floodway ?
YES NO X

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential Q_{100} backwater damages:

A. Residences?	NO X	YES
B. Other Bldgs?	NO X	YES
C. Crops?	NO X	YES
D. Natural and beneficial floodplain values?	NO X	YES

6. Type of Traffic:

A. Emergency supply or evacuation route?	NO	YES X
B. Emergency vehicle access?	NO	YES X
C. Practicable detour available?	NO X	YES
D. School bus or mail route?	NO X	YES

7. Estimated duration of traffic interruption for 100-year event hours: 8

8. Estimated value of Q_{100} flood damages (if any) – moderate risk level.

A.	Roadway	$ 0
B.	Property	$ 0
	Total	$ 0

9 Assessment of Level of Risk

Low X
Moderate ____
High ____

For High Risk projects, during design phase, additional Design Study Risk Analysis May be necessary to determine design alternative.

Signature – Dist. Hydraulic Engineer _____ Date _____
(Item numbers 3,4,5,7,9)

Is there any longitudinal encroachment, significant encroachment, or any support of incompatible Floodplain development?

NO ____ YES X

If yes, provide evaluation and discussion of practicability of alternatives in accordance with 23 CFR 650.113

Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.

Signature – Dist. Project Engineer _____ Date _____
(Item numbers 1,2,6,8)

LOCATION HYDRAULIC STUDY FORM

Dist. 12 Co. OC Rte. 405 P.M. 20.56/20.91
EA 071621 Bridge No. N/A
Floodplain Description: Milan Storm Drain

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Roadway widening over 4x4 RCB, lengthen RCB.

2. ADT: Current 257,000 Projected 352,000 (Alt. 3)

3. Hydraulic Data: Base Flood Q_{100}= Unknown ft^3 / s
WSE_{100}= Unknown The flood of record, if greater than Q_{100}:
Q= Unknown ft^3 / s WSE= Unknown
Overtopping flood Q= Unknown m^3 / s WSE= Unknown
Are NFIP maps and studies available? YES X NO

4. Is the highway location alternative within a regulatory floodway ?
YES NO X

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential Q_{100} backwater damages:

A. Residences?	NO X	YES
B. Other Bldgs?	NO X	YES
C. Crops?	NO X	YES
D. Natural and beneficial floodplain values?	NO X	YES

6. Type of Traffic:

A. Emergency supply or evacuation route?	NO	YES X
B. Emergency vehicle access?	NO	YES X
C. Practicable detour available?	NO X	YES
D. School bus or mail route?	NO X	YES

7. Estimated duration of traffic interruption for 100-year event hours: 0

8. Estimated value of Q_{100} flood damages (if any) – moderate risk level.

A.	Roadway	$	0
B.	Property	$	0
	Total	$	0

9 Assessment of Level of Risk

Low X
Moderate ____
High ____

For High Risk projects, during design phase, additional Design Study Risk Analysis May be necessary to determine design alternative.

Signature – Dist. Hydraulic Engineer _____ Date _____
(Item numbers 3,4,5,7,9)

Is there any longitudinal encroachment, significant encroachment, or any support of incompatible Floodplain development?

NO X YES ____

If yes, provide evaluation and discussion of practicability of alternatives in accordance with 23 CFR 650.113

Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.

Signature – Dist. Project Engineer _____ Date _____
(Item numbers 1,2,6,8)

LOCATION HYDRAULIC STUDY FORM

Dist. 12 Co. OC Rte. 405 P.M. 23.08
EA 071621 Bridge No. N/A
Floodplain Description: Bixby Storm Channel

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Roadway widening, new bypass channel.

2. ADT: Current 370,000 Projected 512,000 (Alt. 3)

3. Hydraulic Data: Base Flood Q_{100}= 203 ft^3 / s
WSE_{100}= Unknown The flood of record, if greater than Q_{100}:
Q= Unknown ft^3 / s WSE= Unknown
Overtopping flood Q= Unknown m^3 / s WSE= Unknown
Are NFIP maps and studies available? YES X NO

4. Is the highway location alternative within a regulatory floodway ?
YES NO X

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential Q_{100} backwater damages:

A. Residences?	NO X	YES
B. Other Bldgs?	NO X	YES
C. Crops?	NO X	YES
D. Natural and beneficial floodplain values?	NO X	YES

6. Type of Traffic:

A. Emergency supply or evacuation route?	NO	YES X
B. Emergency vehicle access?	NO	YES X
C. Practicable detour available?	NO X	YES
D. School bus or mail route?	NO X	YES

7. Estimated duration of traffic interruption for 100-year event hours: 8

8. Estimated value of Q_{100} flood damages (if any) – moderate risk level.

A.	Roadway	$ 0
B.	Property	$ 0
	Total	$ 0

9 Assessment of Level of Risk

Low X
Moderate ____
High ____

For High Risk projects, during design phase, additional Design Study Risk Analysis May be necessary to determine design alternative.

Signature – Dist. Hydraulic Engineer _____ Date _____
(Item numbers 3,4,5,7,9)

Is there any longitudinal encroachment, significant encroachment, or any support of incompatible Floodplain development?

NO X YES

If yes, provide evaluation and discussion of practicability of alternatives in accordance with 23 CFR 650.113

Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.

Signature – Dist. Project Engineer _____ Date _____
(Item numbers 1,2,6,8)

LOCATION HYDRAULIC STUDY FORM

Dist. 12 Co. OC Rte. 405 P.M. 23.53
EA 071621 Bridge No. N/A
Floodplain Description: Montecito Storm Channel

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Roadway widening, soundwalls.

2. ADT: Current 370,000 Projected 512,000

3. Hydraulic Data: Base Flood Q_{100}= 410 ft^3 / s
WSE_{100}= Unknown The flood of record, if greater than Q_{100}:
Q= Unknown ft^3 / s WSE= Unknown
Overtopping flood Q= Unknown m^3 / s WSE= Unknown
Are NFIP maps and studies available? YES X NO

4. Is the highway location alternative within a regulatory floodway ?
YES NO X

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential Q_{100} backwater damages:

A. Residences?	NO X	YES
B. Other Bldgs?	NO X	YES
C. Crops?	NO X	YES
D. Natural and beneficial floodplain values?	NO X	YES

6. Type of Traffic:

A. Emergency supply or evacuation route?	NO	YES X
B. Emergency vehicle access?	NO	YES X
C. Practicable detour available?	NO X	YES
D. School bus or mail route?	NO X	YES

7. Estimated duration of traffic interruption for 100-year event hours: 0

8. Estimated value of Q_{100} flood damages (if any) – moderate risk level.

A.	Roadway	$ 0
B.	Property	$ 0
	Total	$ 0

9 Assessment of Level of Risk

Low X
Moderate ____
High ____

For High Risk projects, during design phase, additional Design Study Risk Analysis May be necessary to determine design alternative.

Signature – Dist. Hydraulic Engineer _____ Date _____
(Item numbers 3,4,5,7,9)

Is there any longitudinal encroachment, significant encroachment, or any support of incompatible Floodplain development?

NO X YES

If yes, provide evaluation and discussion of practicability of alternatives in accordance with 23 CFR 650.113

Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.

Signature – Dist. Project Engineer _____ Date _____
(Item numbers 1,2,6,8)

APPENDIX E

SUMMARY FLOODPLAIN ENCROACHMENT REPORT

SUMMARY FLOODPLAIN ENCROACHMENT REPORT

Dist. 12 Co. OC Rte. 405 P.M. 9.89/11.45
Project No.: 71621 Bridge No.: N/A
Limits: Bristol St. in Costa Mesa to Interstate 605 in Long Beach

Floodplain Description: Gisler Storm Channel

		No	Yes
1.	Is the proposed action a longitudinal encroachment of the base floodplain?		X
2.	Are the risks associated with the implementation of the proposed action significant?	X	
3.	Will the proposed action support probable incompatible floodplain development?	X	
4.	Are there any significant impacts on natural and beneficial floodplain values?	X	
5.	Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain.	X	
6.	Does the proposed action constitute a significant floodplain encroach-ment as defined in 23 CFR, Section 650.105(q).	X	
7.	Are Location Hydraulic Studies that document the above answers on file? If not explain.		X

PREPARED BY:

Signature - Dist. Hydraulic Engineer Date

Signature - Dist. Environmental Branch Chief Date

Signature - Dist. Project Engineer Date

SUMMARY FLOODPLAIN ENCROACHMENT REPORT

Dist. 12 Co. OC Rte. 405 P.M. 11.70
Project No.: 071621 Bridge No.: 55 0476
Limits: Bristol St. in Costa Mesa to Interstate 605 in Long Beach

Floodplain Description: Greenville Banning Channel

		No	Yes
1.	Is the proposed action a longitudinal encroachment of the base floodplain?	X	
2.	Are the risks associated with the implementation of the proposed action significant?	X	
3.	Will the proposed action support probable incompatible floodplain development?	X	
4.	Are there any significant impacts on natural and beneficial floodplain values?	X	
5.	Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain.	X	
6.	Does the proposed action constitute a significant floodplain encroach-ment as defined in 23 CFR, Section 650.105(q).	X	
7.	Are Location Hydraulic Studies that document the above answers on file? If not explain.		X

PREPARED BY:

Signature - Dist. Hydraulic Engineer Date

Signature - Dist. Environmental Branch Chief Date

Signature - Dist. Project Engineer Date

SUMMARY FLOODPLAIN ENCROACHMENT REPORT

Dist. 12 Co. OC Rte. 405 P.M. 12.41
Project No.: 071621 Bridge No.: 55 0258
Limits: Bristol St. in Costa Mesa to Interstate 605 in Long Beach

Floodplain Description: Santa Ana River

		No	Yes
1.	Is the proposed action a longitudinal encroachment of the base floodplain?		X
2.	Are the risks associated with the implementation of the proposed action significant?	X	
3.	Will the proposed action support probable incompatible floodplain development?	X	
4.	Are there any significant impacts on natural and beneficial floodplain values?	X	
5.	Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain.	X	
6.	Does the proposed action constitute a significant floodplain encroach-ment as defined in 23 CFR, Section 650.105(q).	X	
7.	Are Location Hydraulic Studies that document the above answers on file? If not explain.		X

PREPARED BY:

Signature - Dist. Hydraulic Engineer Date

Signature - Dist. Environmental Branch Chief Date

Signature - Dist. Project Engineer Date

SUMMARY FLOODPLAIN ENCROACHMENT REPORT

Dist. 12 Co. OC Rte. 405 P.M. 12.87
Project No.: 071621 Bridge No.: N/A
Limits: Bristol St. in Costa Mesa to Interstate 605 in Long Beach

Floodplain Description: Fountain Valley Channel

		No	Yes
1.	Is the proposed action a longitudinal encroachment of the base floodplain?	X	
2.	Are the risks associated with the implementation of the proposed action significant?	X	
3.	Will the proposed action support probable incompatible floodplain development?	X	
4.	Are there any significant impacts on natural and beneficial floodplain values?	X	
5.	Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain.	X	
6.	Does the proposed action constitute a significant floodplain encroach-ment as defined in 23 CFR, Section 650.105(q).	X	
7.	Are Location Hydraulic Studies that document the above answers on file? If not explain.		X

PREPARED BY:

Signature - Dist. Hydraulic Engineer Date

Signature - Dist. Environmental Branch Chief Date

Signature - Dist. Project Engineer Date

SUMMARY FLOODPLAIN ENCROACHMENT REPORT

Dist. 12 Co. OC Rte. 405 P.M. 14.50/16.98
Project No.: 071621 Bridge No.: 55 0478
Limits: Bristol St. in Costa Mesa to Interstate 605 in Long Beach

Floodplain Description: Ocean View Channel

		No	Yes
1.	Is the proposed action a longitudinal encroachment of the base floodplain?	X	
2.	Are the risks associated with the implementation of the proposed action significant?	X	
3.	Will the proposed action support probable incompatible floodplain development?	X	
4.	Are there any significant impacts on natural and beneficial floodplain values?	X	
5.	Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain.	X	
6.	Does the proposed action constitute a significant floodplain encroach-ment as defined in 23 CFR, Section 650.105(q).	X	
7.	Are Location Hydraulic Studies that document the above answers on file? If not explain.		X

PREPARED BY:

Signature - Dist. Hydraulic Engineer Date

Signature - Dist. Environmental Branch Chief Date

Signature - Dist. Project Engineer Date

SUMMARY FLOODPLAIN ENCROACHMENT REPORT

Dist. 12 Co. OC Rte. 405 P.M. 14.50/16.98
Project No.: 071621 Bridge No.: 55 0480
Limits: Bristol St. in Costa Mesa to Interstate 605 in Long Beach

Floodplain Description: East Garden Grove Wintersburg Channel

		No	Yes
1.	Is the proposed action a longitudinal encroachment of the base floodplain?	X	
2.	Are the risks associated with the implementation of the proposed action significant?	X	
3.	Will the proposed action support probable incompatible floodplain development?	X	
4.	Are there any significant impacts on natural and beneficial floodplain values?	X	
5.	Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain.	X	
6.	Does the proposed action constitute a significant floodplain encroach-ment as defined in 23 CFR, Section 650.105(q).	X	
7.	Are Location Hydraulic Studies that document the above answers on file? If not explain.		X

PREPARED BY:

Signature - Dist. Hydraulic Engineer Date

Signature - Dist. Environmental Branch Chief Date

Signature - Dist. Project Engineer Date

SUMMARY FLOODPLAIN ENCROACHMENT REPORT

Dist. 12 Co. OC Rte. 405 P.M. 20.56/20.91
Project No.: 071621 Bridge No.: N/A
Limits: Bristol St. in Costa Mesa to Interstate 605 in Long Beach

Floodplain Description: Milan Storm Drain

		No	Yes
1.	Is the proposed action a longitudinal encroachment of the base floodplain?	X	
2.	Are the risks associated with the implementation of the proposed action significant?	X	
3.	Will the proposed action support probable incompatible floodplain development?	X	
4.	Are there any significant impacts on natural and beneficial floodplain values?	X	
5.	Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain.	X	
6.	Does the proposed action constitute a significant floodplain encroach-ment as defined in 23 CFR, Section 650.105(q).	X	
7.	Are Location Hydraulic Studies that document the above answers on file? If not explain.		X

PREPARED BY:

Signature - Dist. Hydraulic Engineer Date

Signature - Dist. Environmental Branch Chief Date

Signature - Dist. Project Engineer Date

SUMMARY FLOODPLAIN ENCROACHMENT REPORT

Dist. 12 Co. OC Rte. 405 P.M. 23.08
Project No.: 071621 Bridge No.: N/A
Limits: Bristol St. in Costa Mesa to Interstate 605 in Long Beach

Floodplain Description: Bixby Storm Channel

		No	Yes
1.	Is the proposed action a longitudinal encroachment of the base floodplain?		X
2.	Are the risks associated with the implementation of the proposed action significant?	X	
3.	Will the proposed action support probable incompatible floodplain development?	X	
4.	Are there any significant impacts on natural and beneficial floodplain values?	X	
5.	Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain.	X	
6.	Does the proposed action constitute a significant floodplain encroach-ment as defined in 23 CFR, Section 650.105(q).	X	
7.	Are Location Hydraulic Studies that document the above answers on file? If not explain.		X

PREPARED BY:

Signature - Dist. Hydraulic Engineer Date

Signature - Dist. Environmental Branch Chief Date

Signature - Dist. Project Engineer Date

SUMMARY FLOODPLAIN ENCROACHMENT REPORT

Dist. 12 Co. OC Rte. 405 P.M. 23.53
Project No.: 071621 Bridge No.: N/A
Limits:

Floodplain Description: Montecito Storm Channel

		No	Yes
1.	Is the proposed action a longitudinal encroachment of the base floodplain?	X	
2.	Are the risks associated with the implementation of the proposed action significant?	X	
3.	Will the proposed action support probable incompatible floodplain development?	X	
4.	Are there any significant impacts on natural and beneficial floodplain values?	X	
5.	Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain.	X	
6.	Does the proposed action constitute a significant floodplain encroach-ment as defined in 23 CFR, Section 650.105(q).	X	
7.	Are Location Hydraulic Studies that document the above answers on file? If not explain.		X

PREPARED BY:

Signature - Dist. Hydraulic Engineer Date

Signature - Dist. Environmental Branch Chief Date

Signature - Dist. Project Engineer Date